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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/925,734	08/10/2001	Kazuo Okunishi	204552021000	4815

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EXAMINER	
QIN, YIXING	
ART UNIT	PAPER NUMBER
2625	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/13/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/925,734	OKUNISHI ET AL.	
	Examiner	Art Unit	
	Yixing Qin	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 February 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 August 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

In response to applicant's amendment received 2/2/07, all requested changes have been entered.

Response to Arguments

Applicant's arguments filed 2/2/07 have been fully considered and are persuasive. The AAPA discloses one type of destination information (shipment information) that can be stored on a process cartridge. However, the previously cited reference, Hirst et al (U.S. Patent No. 5,930,553) discloses other information that can be stored in a memory area of a cartridge, which includes item 19a of Fig 2, which is equivalent to the lot number of the applicant's invention. Applicant's claimed invention claims storing both a shipment destination (from AAPA) and storing a destination code (lot number - 19a of Fig. 2 of Hirst et al). Hirst, in addition, shows various other information stored along with the lot number, so it would be obvious to one of ordinary skill to store any kind of pertinent information in a memory of a printer cartridge.

Regarding claim 8 and it's dependents, however, the rejection stands. The manufacturing date of Ueno was given as an example. One can see from Fig. 2 of Ueno that various other information, such as the serial no., corresponding type, or maker code, can be interpreted to be a lot number since they simply identify the. cartridge.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

I. Claims 1-5 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirst et al (U.S. Patent No. 5,930,553) and in view of the Applicant's background.

Regarding claims 1 and 12, Hirst discloses a process cartridge detachably attached to a main body of an image forming device, the process cartridge comprising:

a component for carrying out image formation (column 1, line 50); and

a nonvolatile memory for storing (column 2, lines 32-37)

It does not explicitly disclose "first destination information comprising a shipment destination, to be used to control a printing operation by a control system of the main body of the image forming device, and

second destination information, comprising a destination code, not to be used to control the printing operation by the control system of the main body of the image forming device."

The applicant's background discloses in P[0005] and P[0006] that process cartridges are known to have shipment destinations P[0006] (i.e. first destination

information) discloses how the shipment destination data is accepted (or not accepted) by a printer, meaning that it can control the functionality of the printer

However, Hirst et al discloses in Fig. 2, lines 61-66 that ID/Model numbers and manufacturing date (19a – i.e. second destination information) can be stored with information regarding features of the system, meaning that the memory on the process cartridge can store more than one type of data. While Hirst et al does not go into detail, item 19a is just a form of identification and would be obvious not to affect the control of printing.

Hirst et al and Applicant's Background are combinable because both are in the art of process cartridges.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have a process cartridge with the above information.

The motivation would have been to have a cartridge that could work in multiple locations.

Therefore, it would have been obvious to combine Hirst et al and Applicant's Background to obtain the invention as specified.

Regarding claim 2, Hirst discloses wherein the second destination information is stored at an address at which a lot number of the process cartridge is to be stored."

(Fig. 2 and column 3, lines 60-62 that Fig. 2 is "...one possible consumable memory segmentation scheme..." Hirst et al defines "consumables" in column 1, line

17 as "...toner, ink, ribbon, photoconductor, developer, etc... One can see from item 19a, that there is various data to identify the cartridge.)

Regarding claim 3, Hirst et al discloses wherein the second destination information is in a format to be displayed on a prescribed display unit by the control system of the main body of the image forming device. (column 1, lines 21-24 that "...near the end of the consumable's life, the print engine displays a message to the user on the front panel of the device or a host device..." One would understand that this front panel could be the operational unit as mentioned by Miyamoto et al and that a variety of information could be displayed – it is just a matter of design to display information from the memory instead of just a message. It is also well-known that operation units can have a display - such as a small LCD)

Regarding claim 4, Hirst et al additionally discloses wherein the second destination information is stored in the nonvolatile memory in an order displayed on the display unit. (Fig. 2 and column 5, lines 25-36)

Regarding claim 5, Hirst discloses "wherein the second destination information constitutes part of a lot number of the process cartridge." (Fig. 2, item 19a)

Regarding claims 13 and 14, Hirst

It does not explicitly disclose "wherein the lot number shows that the process cartridge is a value pack/recycled product."

However, the applicant discloses in the submitted prior art in page 2, lines 13-19 of the specification the comparison of a standard and a value pack. Also, since recycled products are well known, it would be obvious to one of ordinary skill in the art at the time of the invention to include information that a cartridge contains recycled parts

Therefore, it would be obvious to include in the lot number that a cartridge is a value pack in the memory information of the combined invention of the first three references.

The motivation would be to help identify items that are the same, but come in different packaging and quantities.

Therefore, it would have been obvious to combine all the references to obtain the invention as specified.

II. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirst et al (U.S. Patent No. 5,930,553) in view of the Applicant's Background and further in view of Official Notice.

Regarding claims 6 and 7, Hirst and the Applicant's Background discloses the storage of destination information in a process cartridge.

It does not explicitly disclose if they are represented in ASCII or hexadecimal in memory.

However, the Examiner takes Official Notice that ASCII and hexadecimal are known notations of data representation in memory.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use either or both representations.

The motivation would have been to use common notations for the sake of compatibility.

Therefore, it would have been obvious to use known notations to obtain the invention as specified.

III. Claims 8-11, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto et al (U.S. Patent No. 5,701,402) and in view of the Applicant's background and further in view of Ueno (U.S. Patent No. 6,144,812).

Regarding claim 8, Miyamoto discloses a process cartridge detachably attached to a main body of an image forming device, the process cartridge comprising:

a component for carrying out image formation (column 1, lines 12-17); and

a nonvolatile memory (Fig. 3)

It does not explicitly disclose "an address at which data comprising a shipment destination used by a control system of the main body of the image forming device is stored,

a first unused address at which data comprising a destination code is stored and of which use by the control system of the main body of the image forming device is not defined, and"

However, Ueno discloses in Fig. 2, item 21 that, for example, a manufacturing date, would not have any control usage. Although there is no "value" as shown in Fig. 2 of Ueno, one knows that in order to store information in memory, it would be in the form of bits or hexadecimal values as shown in Miyamoto.

The applicant's background discloses in P[0005] and P[0006] that process cartridges are known to have shipment destinations and that destination codes are needed for the reasons of product management. P[0006] discloses how the shipment destination data is accepted (or not accepted) by a printer, meaning that it can control the functionality of the printer.

Miyamoto and Applicant's Background are combinable because both are in the art of process cartridges.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have a process cartridge with the unused addressed as claimed.

The motivation would have been to have a cartridge that could work in multiple locations.

Therefore, it would have been obvious to combine Miyamoto and Applicant's Background to obtain the invention as specified.

a second unused address at which no data is stored and of which use by the control system of the main body of the image forming device is not defined. (column 3, line 53 shows that a non-volatile memory is used. In the table in the same column, there is a counter there are vacant addresses 5-63 and the value is current assigned to FFFFH. None of the addresses 5-63 are used as shown in the particular table in column 3)

Regarding claim 9, Miyamoto discloses wherein a median of a parameter range for controlling a printing operation is stored at the first address. (column 4, lines 17-21 discloses that "[a]s the photosensitive drum 12 in the process cartridge 39 shows fluctuation in sensitivity, the correction value for the sensitivity is measured for each process cartridge 39, and the measured correction value is stored as the process conditions 1 and 2 in the non-volatile memory 104. " The contents of the memory are shown in the table in column 4. It would be a matter of design to store the median value in a given memory address since any value of the range of values could be stored. There are also many addresses where the information could be stored)

Regarding claim 10, Miyamoto discloses wherein the control system of the main body of the image forming device judges a version of the process cartridge based on a value stored at the first address. (column 3, that there is a serial number in addresses 0-1.)

Regarding claim 11, Miyamoto discloses wherein a frequently used value out of values stored at the first addresses is stored at a lower address than a less frequently used value. (The Miyamoto et al reference discloses in the tables in columns 3 and 4 that the needed information (i.e. information that is accessed more) is in the lower addresses of the memory and that free memory addresses take up the rest of the

Regarding claim 15, Miyamoto discloses various information stored in a process cartridge.

It does not explicitly disclose "wherein the data used by the control system of the main body of the image forming device is not based on a version of the process cartridge, and data included in the first unused address is based on the version of the process cartridge."

However, the information in item 21 of Fig. 2 of Ueno such as identification codes and maker code can suggest that a version number would be an obvious item to include since most code have some sort of version identification when they are released for use. This means that, for example, the maker code or the date, could obviously be based upon the version number. Ueno further discloses in column 2, line 67 and column 3, lines 1-3 that areas 21 and 23 are written when the cartridge is made at the factory and/or delivered. Area 26 is written every image formation, meaning that the information in this area that is being used does not depend on the version of the cartridge since it can be written after the version of the cartridge has been set (which would be in area 21 at the factory

All the references are in the art of image processing and using memory for the storage of data in regards to an image formation section.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have memory that contains version information.

The motivation is to enable a user or a machine to easily identify whether a cartridge is the one fitted for a particular printer.

Therefore, it would have been obvious to combine all the references to obtain the invention as specified.

IV. Claims 16-18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirst et al (U.S. Patent No. 5,930,553) in view of the Applicant's background and further in view of Ueno (U.S. Patent No. 6,144,812).

Regarding claims 16 and 17, Hirst and the Applicant's background discloses various information that can be stored in the memory of a process cartridge.

It does not explicitly disclose any information regarding reference voltages.

However, the tertiary reference, Ueno discloses in Fig. 2, item 23 that there is a default primary high-voltage bias setting value.

All reference are in the art of image processing and using memory for the storage of data in regards to an image formation section.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have memory that contains voltage information.

The motivation is to enable a user or a machine to easily identify whether a cartridge is the one fitted for a particular printer.

Therefore, it would have been obvious to combine all the references to obtain the invention as specified.

Regarding claims 18 and 20, the information in item 21 of Fig. 2 of the tertiary reference Ueno such as identification codes and maker code can suggest that a version number would be an obvious item to include since most code have some sort of version identification when they are released for use. This means that, for example, the maker code or the date, could obviously be based upon the version number. Ueno further discloses in column 2, line 67 and column 3, lines 1-3 that areas 21 and 23 are written when the cartridge is made at the factory and/or delivered. Area 26 is written every image formation, meaning that the information in this area that is being used does not depend on the version of the cartridge since it can be written after the version of the cartridge has been set (which would be in area 21 at the factory

V. Claims 21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirst et al (U.S. Patent No. 5,930,553) and in view of the Applicant's background and further in view of Applegate et al (U.S. Patent No. 5,995,774).

Regarding claims 21 and 23, Hirst discloses a variety of consumables in a printer. (column 1, lines 15-55)

It does not explicitly disclose "wherein the image forming device comprises a photoreceptor drum, a charger, an exposing device, a developing device, a cleaner and a toner reservoir as components configured to execute image formation, and the process cartridge includes only the toner reservoir."

However, Applegate et al discloses in the first few sentences of the abstract a detachable cartridge containing a toner reservoir.

All references are combinable because they are all in the art of using process cartridges in a printing device.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used a process cartridge with a toner reservoir in Miyamoto's invention.

The motivation would have been to enable toner to be easily changed by swapping out the cartridge.

Therefore, it would have been obvious to combine all the references to obtain the invention as specified.

VI. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto et al (U.S. Patent No. 5,701,402) in view of the Applicant's background in view of Ueno (U.S. Patent No. 6,144,812) and further in view of Applegate et al (U.S. Patent No. 5,995,774).

Regarding claims 22, Miyamoto discloses a copier containing the various claimed parts and process cartridge.

It does not explicitly disclose "wherein the image forming device comprises a photoreceptor drum, a charger, an exposing device, a developing device, a cleaner and a toner reservoir as components configured to execute image formation, and the process cartridge includes only the toner reservoir."

However, Applegate et al discloses in the first few sentences of the abstract a detachable cartridge containing a toner reservoir.

All references are combinable because they are all in the art of using process cartridges in a printing device.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used a process cartridge with a toner reservoir in Miyamoto's invention.

The motivation would have been to enable toner to be easily changed by swapping out the cartridge.

Therefore, it would have been obvious to combine all the references to obtain the invention as specified.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yixing Qin whose telephone number is (571)272-7381. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler Lamb can be reached on (571)272-7406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

YQ

TWYLER LAMB
SUPERVISORY PATENT EXAMINER